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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,329	06/12/2001	John S. Eden	10010357-1	5804

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EXAMINER

WEST, JEFFREY R

ART UNIT PAPER NUMBER

2857

DATE MAILED: 02/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/880,329

Applicant(s)

EDEN, JOHN S.

Examiner

Jeffrey R. West

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (see page 1, lines 26+). See MPEP § 608.02(g).
2. The drawings are objected to because they do not have sufficiently descriptive labels. Blank boxes in drawings should be labeled descriptively unless it is a well-known component.
3. The drawing in Figure 2 is objected to because the "test routine" has two labels of "210"
4. The drawings are objected to because on page 10, lines 9-12, the specification describes the difference between parent classes and derived classes in that the parent classes have heavy borders and the derived classes have fine borders. The Figures, however, do not show this difference.
5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

6. The abstract of the disclosure is objected to because its length is less than the required 50 words. Correction is required. See MPEP § 608.01(b).

7. The disclosure is objected to because on page 2, line 21, "test routine for of a particular" should be ---test routine for a particular---.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 2, 7, 10-15, 18, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,279,131 to Archambeau et al. in view of U.S. Patent No. 4,884,228 to Stanley et al.

Archambeau discloses an automated testing system comprising multiple computing resource components including a test execution engine that receives input files and global variables for each specific instrument under test as well as a command to call a test routine (column 3, line 64 to column 4, line 11) and, based on the processing of the global variables associated with the specific instrument, adapts the communication protocols to allow the test routine to be executed and receive the

corresponding test results without (i.e. shielding from) dependencies on the hardware and software interfaces of the devices under test (column 4, lines 26-41).

Archambeau also discloses that the computer resource environment includes a microprocessor interfacing with memory, an external nonvolatile data storage device, such as a disk drive, and an input/output interface device with multiple input/output communication channels permitting communication using a plurality of different protocols to a plurality of external peripherals, all under the control of a program stored in the system memory (column 2, line 65 to column 3, line 10).

Archambeau discloses implementing this method in order to provide flexibility in the use of different external test instruments (i.e. hardware) that communicate with the controlling computer (column 2, lines 40-53) and that may be required at different locations (column 3, lines 56-60).

Archambeau discloses that the computer controlling test program defines a test sequence/pattern that handles hierarchical ordering/synchronizing of launching and execution behaviors of the testing routines (column 3, lines 11-41).

Archambeau, however, teaches a general testing overview without the specifics for adapting all the device interfaces such as operating system interfaces.

Stanley teaches a flexible instrument control system comprising the method of configuring the operating modes of a micro-computer based instrument by software organized into an operating system, a control interface system, a command execution system, an inter-board communication system, and a steady state system wherein the operating system provides memory management, multi-tasking, and

other typical operating system functions (column 2, lines 21-28). Stanley also teaches subsystems provided by the operating system that adapt the system for communication between the instrument microcomputer and other hardware systems as well as subsystems that adapt the system to carry out various software-based operations of the instrument (column 2, lines 29-43).

Stanley also teaches configuring the various subsystems to run in one of a plurality of different modes of operation based on user inputs (i.e. elicited by input commands) (column 5, lines 17-19) and that the flexible software architecture, which accommodates changes in hardware and software operations without extensive modification of preexisting software, performs a plurality of tasks in a synchronized and concurrent fashion (column 6, lines 29-54) or according to a sequential/asynchronized priority scheme (column 12, lines 31-36).

It would have been obvious to one having ordinary skill in the art to modify the invention of Archambeau, to include the specifics for adapting all the device interfaces, such as operating system interfaces, as taught by Stanley, because Archambeau teaches a system wherein all of the test instruments are remotely controllable by commands received from the central computer (column 2, lines 43-45) and Stanley suggests a method for adapting all of the interfaces between the tester and devices under test in order to implement that control in a way that permits addition of new hardware and software subsystem and configuration control sources without extensive modification to pre-existing software subsystems (column 12, lines 5-9).

With respect to claims 12-14, and 22, although the invention of Archambeau and Stanley doesn't specifically disclose activating and deactivating mode components to have a single mode component active at each instant in time, Stanley does teach configuring the system based on a selected mode of operation and therefore it is considered inherent that in order to operate in the user selected mode, the previous mode must be deactivated and the new mode must be activated.

With respect to claims 7 and 18, since the invention of Archambeau and Stanley includes a test execution engine that executes a test routine that is stored on a memory coupled to the engine (i.e. stored in a separate executable within the computing resource environment), it is considered inherent that the engine and routine must be adapted to each other for data transfer between the two to occur.

10. Claims 4, 9, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Archambeau in view of Stanley and further in view of U.S. Patent No. 6,473,707 to Grey.

As noted above, the invention of Archambeau and Stanley teaches all the features of the claimed invention except for including multiple result handling components or presentation components such as interfaces to disk files, printers, and databases.

Grey teaches a test executive system and method for providing improved flexibility, modularity, and configurability (column 2, lines 39-41) comprising a test routine executed by a test execution engine (column 5, lines 55-67) which tests a

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plurality of devices and receives test results (column 6, lines 10-19) wherein obtaining the test results includes a plurality of result handlers that can control customized report generation and database result logging (column 6, lines 53-57).

It would have been obvious to one having ordinary skill in the art to modify the invention of Archambeau and Stanley to include multiple result handing components and presentation components such as interfaces to disk files and databases, as taught by Grey, because, as suggested by Grey, the combination would have provided the results to the user in a detailed organized form (column 7, line 53 to column 8, line 7 and column 64, lines 29-34)

Further, although the invention of Archambeau, Stanley, and Grey doesn't specifically disclose providing an output to a printer, the combination does include forming reports and including an interface to a printer would have been a well-known method obvious to one having ordinary skill in the art for outputting the reports to a user.

11. Claims 3, 5, 6, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Archambeau in view of Stanley and Grey and further in view of U.S. Patent No. 5,715,387 to Barnstijn et al.

As noted above, the invention of Archambeau and Stanley teaches all the features of the claimed invention except for specifying that the plurality of interfaces include a timer interface.

Barnstijn teaches a method and system for loading and confirming correct operation of an application program in a target system comprising a program on a host computer that translates operating system calls into a number of communication signals to a communication program compatible to the host program (column 2, lines 57-66) wherein the operating system includes a timer that can be programmed by the operating system to generate an event after a known fixed time delay (column 6, lines 5-9).

It would have been obvious to one having ordinary skill in the art to modify the invention of Archambeau, Stanley, and Grey to include specifying that the plurality of interfaces include a timer interface, as taught by Barnstijn, because the invention of Archambeau, Stanley, and Grey teaches an operating system interface including memory management and other common operating system functions (Stanley, column 2, lines 21-28) and Barnstijn teaches the well-known timer function of an operating system that allows for time-out detection (column 6, lines 5-9).

12. Claim 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Archambeau in view of Stanley and further in view of U.S. Patent No. 5,828,985 to Sauer et al. and U.S. Patent No. 6,415,406 to Kaiser.

As noted above, the invention of Archambeau and Stanley teaches many of the features of the claimed invention including a test executor component that adapts the test execution engine to a test routine executable that runs within the computing

resource environment, but does not teach adapting the test execution engine to a routine linked to object code in the same executable or an external test routine.

Sauer teaches a semiconductor test system which is capable of easily and quickly modifying the software for controlling new hardware when the hardware resources in the semiconductor test system are modified by addition or replacement (column 2, lines 35-40) wherein the master processor converts the test program, which is in the source code, to the object code to interpret the test program (column 4, lines 6-12).

Kaiser teaches an integrated circuit having a self-test device and a program memory to store and externally loadable test program for the self test device (column 1, lines 35-39) wherein, during operation, the program memory is supplied to the external terminal to load external test programs, having program commands, into an internal program memory (column 2, lines 48-55).

It would have been obvious to one having ordinary skill in the art to modify the invention of Archambeau and Stanley to include adapting the test execution engine to a routine linked to object code in the same executable or an external test routine, as taught by Sauer and Kaiser, because the combination would have provided a method functionally equivalent to that of Archambeau and Stanley for providing test commands, in a method that adhered to space constraints in a system by not requiring an extra hardware module in the system and, as suggested by Sauer and Kaiser, allowed for quick and efficient modifications (Sauer, column 3, lines 13-26) or

provided an interrupt function to provide any desired regular program commands within the test program in any desired order (Kaiser, column 4, lines 63-66).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. 6,128,759 to Hansen teaches a flexible test environment for automatic test equipment.

U.S. Patent No. 5,757,680 to Boston et al. teaches a method and arrangement for configuring electronic devices for multiple testing formats.

U.S. Patent No. 5,897,609 to Choi et al. teaches a multiple port protocol test apparatus and method thereof.

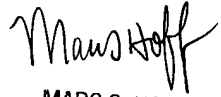
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (703)308-1309. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

jr
February 9, 2003


MARC S. HOFF
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